Claims

1. A latch mechanism including:

a latch bolt moveable between a primary latched position and an open position,

a first pawl moveable between a first engaged position, where it secures the latch bolt in at least its primary latched position and a second released position, where it releases the latch bolt from at least its first primary latched position,

release means moveable between a first engaged position, where it allows the first pawl to achieve its first engaged position and a second released position, where it retains the first pawl in its second released position, and

a second pawl moveable between a first engaged position, where it is capable of retaining the release means in its second released position, and a second released position, where it releases the release means from its second released position,

such that the latch mechanism can be latched and unlatched.

2. A latch mechanism as defined in claim 1 in which the release means is fast with the first pawl.

3. A latch mechanism as defined in claim 1 in which release means is moveable relative to the first pawl.

4. A latch mechanism as defined in any preceding claim in which the latch bolt additionally has a secondary latched position intermediate the primary latch position and the open position.

5. A latch mechanism as defined in any preceding claim in which a trip abutment on the latch bolt is capable of moving the second pawl from its first engaged position to its second released position allowing the latch mechanism to latch.

6. A latch mechanism as defined in claim 5 in which the trip abutment is capable of moving the second pawl during movement of the latch bolt from its open position to its primary or secondary latched position.

7. A latch mechanism as defined in claim 5 or 6 in which the trip abutment does not affect retention of the release means in its second released position by the second pawl during movement of the latch bolt from its primary or secondary latched position to its open position.

8. A latch mechanism as defined in claim 5 or 6 or 7 in which the trip abutment moves the second pawl by engagement with a third pawl.

9. A latch mechanism as defined in claim 8 in which the third pawl allows the latched bolt to move from its primary or secondary latched position to its open position without movement of the second pawl.

10. A latch mechanism as defined in claim 8 or 9 in which the third pawl is mounted on the second pawl.

11. A latch mechanism as defined in claim 8 or 9 in which the third pawl is mounted on a chassis of the latch assembly.

12. A latch mechanism as defined in any preceding claim in which a first arm of the release means is engaged to move the release means from its first engaged position to its second released position.

13. A latch mechanism as defined in any preceding claim in which an arm (56) of the release means is engaged by the second pawl to retain the release means in its second released position.

14. A latch mechanism as defined in any preceding claim including a power actuator having a motor and a drive train.

15. A latch mechanism as defined in claim 14 in which the motor only operates in one direction.

16. A latch mechanism as defined in claim 14 or 15 in which the drive train only operates in one direction.

17. A latch mechanism as defined in any one of claims 14 to 16 in which the drive train includes a first abutment operable to move the release means from its first engaged position to its second released position.

18. A latch mechanism as defined in claim 17 when dependent upon claim 12 in which the first abutment of the drive train engages the first arm of the release means.

19. A latch mechanism as defined in claims 14 to 18 in which the drive train includes a second abutment which co-operates with the release means to provide a drive train stop.

20. A latch mechanism as defined in claim 19 in which the second abutment co-operates with an arm (54) of the release means.

21. A latch mechanism as defined in claim 19 or 20 when dependent upon claim 17 in which the first abutment is capable of acting as the second abutment.

22. A latch mechanism including a power actuator, the power actuator having a motor and a drive train, the drive train having at least one abutment for engagement with a release means of the latch mechanism, energisation of the motor causing the abutment to move the release means from a first engaged position to a second released position to release the latch, in which a retention means (58) is capable of retaining the release means in its second released position.

23. A latch mechanism including a power actuator, the power actuator having a motor and a drive train, the drive train having a plurality of abutments for engagement with a release arrangement of the latch mechanism, energisation of the motor causing one of the plurality of abutments to move the release arrangement from a first engaged position to second released position to release the latch, resulting in another of the plurality of abutments co-operating with the release arrangement to provide a drive train stop.

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24. A latch mechanism as defined in Claim 23 in which the latch mechanism includes a latch bolt moveable between a primary latch position and an open position, and the release arrangement includes a first pawl moveable between a first engaged position where it secures the latch bolt in at least its primary latch position and a second release position, where is releases the latch bolt from at least its first primary latch position, the release arrangement further including release means moveable between the first engaged position, where it allows the first pawl to achieves its first engaged position and a second release position where it retains the first pawl in its second release position.

25. A latch mechanism as defined in Claim 24 in which the release means is fast with the first pawl.

26. A latch arrangement as defined in Claim 24 in which the release means is moveable relative to the first pawl.

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27. A latch mechanism as defined in Claims 23 to 26 in which the plurality of abutments includes a first set of abutments to move the release arrangement from the first engaged position to the second release position and a second set of abutments for co-operation with the release arrangement to provide the drive train stop.

28. A latch mechanism as defined in Claim 27 when dependent upon Claim 24 in which the first set of abutments acts on the release means and the second set of abutments act on the pawl.